



PATENT  
Docket No.: MAN-013

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Group Art Unit: 2811

Examiner: Hu, Shouxiang

Serial No.: 10/723,285

Filed: November 25, 2003

In re Application of: Werner et al.

For: SEMICONDUCTOR STRUCTURE FOR USE IN THE NEAR INFRARED REGION  
AND A METHOD OF MANUFACTURING THIS SEMICONDUCTOR STRUCTURE

Certificate of Mailing

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail, in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on 3-31-05, Signed Carol Stanley  
Carol Stanley

**TRANSMITTAL LETTER**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Enclosed please find the following:

1. Information Disclosure Statement;
2. Form PTO-1449;
3. 12 References;
4. Check in the amount of \$180.00.

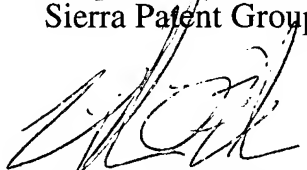
Please contact Applicant's attorney at the address, telephone or facsimile number if there are any matters whose resolution can be expedited thereby.

Dated:

31 March 2005

Sierra Patent Group, Ltd.  
P.O. Box 6149  
Stateline, NV 89449  
(775) 586-9500 Telephone  
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Respectfully submitted,  
Sierra Patent Group, Ltd.

  
William P. Wilbar  
Reg. No.: 43,265



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**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Each item of information listed in the attached FORM PTO-1449, for which a copy of each is attached, may be material to the examination of the above-identified application and is, therefore, submitted in compliance with the duty of disclosure defined in 37 CFR §§1.56, 1.97 and 1.98. The Examiner is requested to make these items of official record in this application.

This Information Disclosure Statement under 37 CFR §§1.56, 1.97 and 1.98 is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that any one or more of these items constitutes prior art.

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01 FEB 2006 150.00 EP



I

This statement is filed pursuant to:

- ( ) 37 C.F.R. §1.97(b).

This information disclosure statement is filed either (1) within three months of the filing date of the national applications; (2) within three months of the date of entry of the national stage as set forth in 37 C.F.R. §1.491 in an international application; or (3) before the mailing date of a first office action on the merits, whichever event occurs last.

Accordingly, this information disclosure statement requires no fee and no certification.

- (X) 37 C.F.R. §1.97(c).

This information disclosure statement is filed after the period specified in 37 C.F.R. §1.97(b), but before the mailing date of either (1) a final action under 37 C.F.R. §1.113 or (2) a notice of allowance under 37 C.F.R. §1.311.

Accordingly, this information disclosure statement requires either the fee specified in 37 C.F.R. § 1.17 (p) or a certification according to 37 C.F.R. §1.97(e).

- ( ) 37 C.F.R. §1.97(d).

This information disclosure statement is filed after the period specified in 37 C.F.R. §1.97(c).

Accordingly, this information disclosure statement requires the fee specified in 37 C.F.R. §1.17(p), \$180.00, for submission of an information disclosure statement under 37 C.F.R. §1.97(d), and a statement according to 37 C.F.R. §1.97(e).

37 C.F.R. §1.97(e).

- (X) (1) Each item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the statement.
- ( ) (2) No item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, or, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. §1.56(c), more than three months prior to the filing of the statement.

If this statement crosses in the mail with an office action, or is otherwise not in the indicated category of 37 C.F.R. §1.97, it is respectfully requested that this statement be treated in the next appropriate category and made of record. To the extent required, please treat this paper as a conditional petition for acceptance of the information disclosure statement.

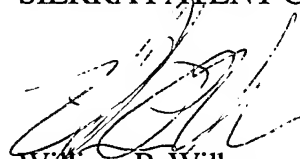
II

- ( ) No fee is due.
- (X) The fee specified in 37 C.F.R. §1.17(p) for submission of an information disclosure statement under 37 C.F.R. §1.97(c), 37 C.F.R. § 1.97(d), or 37 C.F.R. §1.97(e) is enclosed, \$180.00.

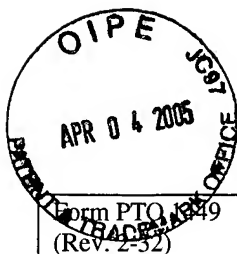
In the event any fee is required for filing the above-noted document, including any fees required under 37 CFR 1.136 for any necessary Extension of Time to make the filing attached document timely, the Assistant Commissioner is hereby authorized to charge the fee to our Deposit Account No. 50-0612. A duplicate of this page is enclosed.

Dated: *31 March 2005*

Respectfully submitted,  
SIERRA PATENT GROUP, LTD.

  
William P. Wilbar  
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|   |     |  |          |  |        |                              |             |                          |  |
|---|-----|--|----------|--|--------|------------------------------|-------------|--------------------------|--|
| Form PTO 1589<br>(Rev. 2-32)  |     |  |          | U.S. Department of Commerce<br>Patent and Trademark Office |        | Atty. Docket No.<br>MAN-013  |             | Serial No.<br>10/723,285 |  |
| Information Disclosure Statement by Applicant   |     |  |          |  |        | Applicant:<br>Werner, et al. |             |                          |  |
| (Use several sheets if necessary)   |     |  |          |  |        | Filed: November 25, 2003     |             | Group: 2811              |  |
| U.S. Patent Documents   |     |  |          |  |        |                              |             |                          |  |
| Init.   |     | Document No.   | Date     | Name   | Class  | Subclass                     | Filing Date |                          |  |
|   |     |  |          |  |        |                              |             |                          |  |
| Foreign Documents   |     |  |          |  |        |                              |             |                          |  |
| Translation   |     |  |          |  |        |                              |             |                          |  |
| Init.   |     | Document No.   | Date     | Country  | Class  | Subclass                     | Yes         | No                       |  |
|   | 1.  | 102 07 952 A1  | 09/04/03 | DE   | H 01 L | 21/3063                      |             | X                        |  |
|   |     |  |          |  |        |                              |             |                          |  |
| Other Documents (Including Author, Title, Date, Pertinent Pages, etc.)  |     |  |          |  |        |                              |             |                          |  |
|   | 2.  | L. Colace et al., "Efficient high-speed near-infrared Ge photodetectors integrated on Si substrates", <u>Applied Physics Letters</u> , pgs. 1231-1233, 6 March 2000.   |          |  |        |                              |             |                          |  |
|   | 3.  | A.G. Cullis et al., "The structural and luminescence properties of porous silicon", <u>Applied Physics Reviews</u> , pgs. 909-965 1 August 1997.   |          |  |        |                              |             |                          |  |
|   | 4.  | H. Presting et al., "Room-temperature electroluminescence from Si/Ge/Si <sub>1-x</sub> Ge <sub>x</sub> quantum-well diodes grown by molecular-beam epitaxy", <u>Applied Physics Letters</u> , pgs. 2376-2378, 14 October 1996. |          |  |        |                              |             |                          |  |
|   | 5.  | T. Brunhes et al., "Electroluminescence of Ge/Si self-assembled quantum dots grown by chemical vapor deposition", <u>Applied Physics Letters</u> , pgs. 1822-1824, 18 September 2000.  |          |  |        |                              |             |                          |  |
|   | 6.  | E. Eberl et al., "Pseudomorphic Si <sub>1-y</sub> C <sub>y</sub> and Si <sub>1-x-y</sub> Ge <sub>x</sub> C <sub>y</sub> alloy layers on Si", <u>Thin Solid Films</u> , pgs. 98-104, 1997.                                      |          |  |        |                              |             |                          |  |
|   | 7.  | O.G. Schmidt et al., "Multiple layers of self-assembled Ge/Si islands: Photoluminescence, strain fields, material interdiffusion, and island formation", <u>Physical Review B</u> , pgs. 721-729, 15 May 2000.                 |          |  |        |                              |             |                          |  |
|   | 8.  | M. Goryll et al., "Morphology and photoluminescence of Ge islands grown on Si(001)", <u>Thin Solid Films</u> , pgs. 244-247, 1998.   |          |  |        |                              |             |                          |  |
|   | 9.  | H. Sunamura et al., "Photoluminescence investigation on growth mode changeover of Ge on Si(100)", <u>Journal of Crystal Growth</u> , pgs. 265-269, 1995.   |          |  |        |                              |             |                          |  |
|   | 10. | O.G. Schmidt et al., "Effect of overgrowth temperature on the photoluminescence of Ge/Si islands", <u>Applied Physics Letters</u> , pgs. 2509-2511, 16 October 2000.   |          |  |        |                              |             |                          |  |
|   | 11. | Y.Q. Wang et al., "High-efficiency visible photoluminescence from amorphous silicon nanoparticles embedded in silicon nitride," <u>Applied Physics Letters</u> , pgs. 3474-3476, 27 October 2003.                              |          |  |        |                              |             |                          |  |
|   | 12. | P. Werner et al., "Interface structure and Schottky barrier height of buried CoSi <sub>2</sub> /Si(001) layers," <u>J. Applied Physics</u> , pgs. 3846-3854, 15 September 1993.  |          |  |        |                              |             |                          |  |
| Examiner  |     |  |          |  |        | Date Considered              |             |                          |  |
| Examiner: Initial if citation considered, whether or not citation is in conference with MPEP 609; Draw line through citation if not conformance and not considered. Include a copy of this form with the next communication to applicant. |     |  |          |  |        |                              |             |                          |  |